RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____10/521,454 A_____

Source: _____IFWP_____

Date Processed by STIC: _____08/04/2006_____

ENTERED

RAW SEQUENCE LISTING   DATE: 08/04/2006
PATENT APPLICATION: US/10/521,454A   TIME: 12:04:30

Input Set : A:\2006-05-07 0230-0222PUS1.ST25.txt
Output Set: N:\CRF4\08042006\J521454A.raw

```
 3 <110> APPLICANT: Ichiro HIRAO et al.
 5 <120> TITLE OF INVENTION: NUCLEOSIDES OR NUCLEOTIDES HAVING NOVEL UNNATURAL BASES AND
USE THEREOF
 7 <130> FILE REFERENCE: 0230-0222PUS1
 9 <140> CURRENT APPLICATION NUMBER: US 10/521,454A
10 <141> CURRENT FILING DATE: 2005-01-14
12 <150> PRIOR APPLICATION NUMBER: JP 2002-208568
13 <151> PRIOR FILING DATE: 2002-07-17
15 <160> NUMBER OF SEQ ID NOS: 14
17 <170> SOFTWARE: Patentin 3.3
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 100
21 <212> TYPE: RNA
22 <213> ORGANISM: Artificial sequence
24 <220> FEATURE:
25 <223> OTHER INFORMATION: RNA aptamer
27 <400> SEQUENCE: 1
28 gggaguggag gaauucaucg aggcauaugu cgacuccguc uuccuucaaa ccaguuauaa  60
29 auugguuuua gcauaugccu uagcgacagc aagcuucugc     100
32 <210> SEQ ID NO: 2
33 <211> LENGTH: 39
34 <212> TYPE: DNA
35 <213> ORGANISM: Artificial sequence
37 <220> FEATURE:
38 <223> OTHER INFORMATION: Designed primer for PCR
40 <400> SEQUENCE: 2
41 ggtaatacga ctcactatag ggagtggagg aattcatcg     39
44 <210> SEQ ID NO: 3
45 <211> LENGTH: 29
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Designed primer for PCR
52 <400> SEQUENCE: 3
53 gcagaagctt gctgtcgcta aggcatatg     29
56 <210> SEQ ID NO: 4
57 <211> LENGTH: 29
58 <212> TYPE: DNA
59 <213> ORGANISM: Artificial sequence
61 <220> FEATURE:
62 <223> OTHER INFORMATION: Designed primer for PCR
64 <220> FEATURE:
65 <221> NAME/KEY: misc_feature
66 <222> LOCATION: (17)..(17)
```

RAW SEQUENCE LISTING   DATE: 08/04/2006
PATENT APPLICATION: US/10/521,454A   TIME: 12:04:30

Input Set : A:\2006-05-07 0230-0222PUS1.ST25.txt
Output Set: N:\CRF4\08042006\J521454A.raw

```
      67 <223> OTHER INFORMATION: n is an unnatural base equivalent to a 2-amino-6-(2-thienyl)-
purine-9-yl
      68        group
      70 <400> SEQUENCE: 4
W--> 71 gcagaagctt gctgtcncta aggcatatg                29
      74 <210> SEQ ID NO: 5
      75 <211> LENGTH: 29
      76 <212> TYPE: DNA
      77 <213> ORGANISM: Artificial sequence
      79 <220> FEATURE:
      80 <223> OTHER INFORMATION: Designed primer for PCR
      82 <220> FEATURE:
      83 <221> NAME/KEY: misc_feature
      84 <222> LOCATION: (14)..(14)
      85 <223> OTHER INFORMATION: n is an unnatural base equivalent to a 2-amino-6-(2-thienyl)-
purine-9-yl
      86        group
      89 <400> SEQUENCE: 5
W--> 90 gcagaagctt gctntcgcta aggcatatg                29
      93 <210> SEQ ID NO: 6
      94 <211> LENGTH: 29
      95 <212> TYPE: DNA
      96 <213> ORGANISM: Artificial sequence
      98 <220> FEATURE:
      99 <223> OTHER INFORMATION: Designed primer for PCR
     101 <220> FEATURE:
     102 <221> NAME/KEY: misc_feature
     103 <222> LOCATION: (9)..(9)
     104 <223> OTHER INFORMATION: n is an unnatural base equivalent to a 2-amino-6-(2-
thienyl)-purine-9-yl
     105        group
     107 <400> SEQUENCE: 6
W--> 108 gcagaagcnt gctgtcgcta aggcatatg                29
     111 <210> SEQ ID NO: 7
     112 <211> LENGTH: 29
     113 <212> TYPE: DNA
     114 <213> ORGANISM: Artificial sequence
     116 <220> FEATURE:
     117 <223> OTHER INFORMATION: Designed primer for PCR
     119 <220> FEATURE:
     120 <221> NAME/KEY: misc_feature
     121 <222> LOCATION: (9)..(9)
     122 <223> OTHER INFORMATION: n is a, g, c, t, unknown or other
     124 <220> FEATURE:
     125 <221> NAME/KEY: misc_feature
     126 <222> LOCATION: (17)..(17)
     127 <223> OTHER INFORMATION: n is an unnatural base equivalent to a 2-amino-6-(2-
thienyl)-purine-9-yl
     128        group
     130 <400> SEQUENCE: 7
W--> 131 gcagaagcnt gctgtcncta aggcatatg                29
     134 <210> SEQ ID NO: 8
     135 <211> LENGTH: 35
```

```
    136 <212> TYPE: DNA
    137 <213> ORGANISM: Artificial sequence
    139 <220> FEATURE:
    140 <223> OTHER INFORMATION: Synthesized template strand for transcription
    142 <220> FEATURE:
    143 <221> NAME/KEY: misc_feature
    144 <222> LOCATION: (29)..(29)
    145 <223> OTHER INFORMATION: n is an unnatural base equivalent to a 2-amino-6-(2-
thienyl)-purine-9-yl
    146       group
    148 <400> SEQUENCE: 8
W--> 149 tattatgctg agtgatatcc ctccttctnt ctcgt            35
    152 <210> SEQ ID NO: 9
    153 <211> LENGTH: 35
    154 <212> TYPE: DNA
    155 <213> ORGANISM: Artificial sequence
    157 <220> FEATURE:
    158 <223> OTHER INFORMATION: Synthesized template strand for transcription
    160 <400> SEQUENCE: 9
    161 tattatgctg agtgatatcc ctccttctat ctcgt            35
    164 <210> SEQ ID NO: 10
    165 <211> LENGTH: 28
    166 <212> TYPE: DNA
    167 <213> ORGANISM: Artificial sequence
    169 <220> FEATURE:
    170 <223> OTHER INFORMATION: Designed primer for transcription
    172 <400> SEQUENCE: 10
    173 ataatcgact ctactatagg gaggaaga             28
    176 <210> SEQ ID NO: 11
    177 <211> LENGTH: 200
    178 <212> TYPE: RNA
    179 <213> ORGANISM: Artificial sequence
    181 <220> FEATURE:
    182 <223> OTHER INFORMATION: RNA aptamer 9A
    184 <400> SEQUENCE: 11
    185 gggaguggag gaauucaucg aggcauaugu cgacuccguc uuccuucaaa ccaguuauaa      60
    187 auugguuuua gcauaugccu uagcgacagc aagcuucugc gggaguggag gaauucaucg     120
    189 aggcauaugu cgacuccguc uuccuucaaa ccaguuauaa auugguuuua gcauaugccu     180
    191 uagcgacagc aagcuucugc                                                200
    194 <210> SEQ ID NO: 12
    195 <211> LENGTH: 101
    196 <212> TYPE: RNA
    197 <213> ORGANISM: Artificial sequence
    199 <220> FEATURE:
    200 <223> OTHER INFORMATION: RNA aptamer 2x9A
    202 <400> SEQUENCE: 12
    203 gggaguggag gaauucaucg aggcaucugg gaacccuauc uugcuuuugg uagcuguauu      60
    205 caccuguaac agcauaugcc uuagcgacag caagcuucug c                        101
    207 <210> SEQ ID NO: 13
    208 <211> LENGTH: 15
```

RAW SEQUENCE LISTING   DATE: 08/04/2006
PATENT APPLICATION: US/10/521,454A TIME: 12:04:31

Input Set : **A:\2006-05-07 0230-0222PUS1.ST25.txt**
Output Set: **N:\CRF4\08042006\J521454A.raw**

```
        209 <212> TYPE: RNA
        210 <213> ORGANISM: Artificial sequence
        212 <220> FEATURE:
        213 <223> OTHER INFORMATION: Synthetic RNA 15-mer
        215 <220> FEATURE:
        216 <221> NAME/KEY: misc_feature
        217 <222> LOCATION: (11)..(11)
        218 <223> OTHER INFORMATION: n is a, g, c, u, unknown or other
        220 <400> SEQUENCE: 13
W-->    221 gggaggaaga nagag          15
        224 <210> SEQ ID NO: 14
        225 <211> LENGTH: 17
        226 <212> TYPE: RNA
        227 <213> ORGANISM: Artificial sequence
        229 <220> FEATURE:
        230 <223> OTHER INFORMATION: Synthetic RNA 17-mer
        232 <220> FEATURE:
        233 <221> NAME/KEY: misc_feature
        234 <222> LOCATION: (11)..(11)
        235 <223> OTHER INFORMATION: n is a, g, c, u, unknown or other
        237 <400> SEQUENCE: 14
W-->    238 gggaggaaga nagagca        17
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/04/2006
PATENT APPLICATION: US/10/521,454A   TIME: 12:04:32

    Input Set : A:\2006-05-07 0230-0222PUS1.ST25.txt
    Output Set: N:\CRF4\08042006\J521454A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 17
Seq#:5; N Pos. 14
Seq#:6; N Pos. 9
Seq#:7; N Pos. 9, 17
Seq#:8; N Pos. 29
Seq#:13; N Pos. 11
Seq#:14; N Pos. 11

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:4; Line(s) 67
Seq#:5; Line(s) 85
Seq#:6; Line(s) 104
Seq#:7; Line(s) 127
Seq#:8; Line(s) 145

VERIFICATION SUMMARY   DATE: 08/04/2006
PATENT APPLICATION: **US/10/521,454A**   TIME: 12:04:32

Input Set : **A:\2006-05-07 0230-0222PUS1.ST25.txt**
Output Set: **N:\CRF4\08042006\J521454A.raw**

```
L:71 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
```